

Detailed Action

Response to Amendment

1. Applicant's Remarks/Arguments filed on 1/16/2009 regarding claims 1-21, 23, 25-86, 93-95, 100-102 have been considered. Claims 22, 24, 87-92, 96-99 have been canceled by applicant. Claims 1-21, 23, 25-86, 93-95, 100-102 are currently pending.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with applicant's representative, Mr. Howard Zaretsky, on 3/13/2009.

The application has been amended for claims 20, 80, 83, and 94 as follows:

20. (Currently Amended) A method of accessing a channel in a communication transceiver coupled to a communications channel in a network including a plurality of stations, said method comprising the steps of:

dividing contention for access to said channel into one or more contention windows each contention window assigned a priority and subdivided into a plurality of backoff time slots;

deferring zero or more contention windows until arrival of a contention window whose priority corresponds to the priority of a particular transmission;

each station wishing to transmit, initializing a backoff counter with a backoff count equal to a random number of backoff time slots;

decrementing said backoff counter while said channel is idle; and

attempting to reserve said channel upon expiration of said backoff counter.

80. (Currently Amended) A method of accessing a communications channel in a network including a plurality of stations, said method comprising the steps of:

establishing one or more contention windows in which said plurality of stations compete for access to said communications channel;

assigning a different priority to each of said one or more contention windows;

each station wishing to transmit, initializing a backoff counter with a backoff count equal to a random number of backoff time slots;

waiting until the arrival of a contention window having a priority corresponding to the priority of transmission of a particular station and upon the arrival thereof decrementing said backoff counter while said channel is idle; and

attempting to reserve said communications channel upon expiration of said backoff counter.

83. (Currently Amended) A method of accessing a communications channel in a network including a plurality of stations, said method comprising the steps of:

establishing one or more contention windows during which said plurality of stations compete for access to said communications channel;

assigning a priority to each of said one or more contention windows;

each station wishing to transmit, initializing a backoff counter with a backoff count equal to a random number of backoff time slots;

waiting until the arrival of a contention window having a priority corresponding to the priority of transmission of a particular station and upon the arrival thereof decrementing said backoff counter while said channel is idle;

attempting to reserve said channel upon expiration of said backoff counter; and
adjusting the size of a contention window as a function of a number of said plurality of stations
contending for said communications channel in said contention window.

94. (Currently Amended) A method of accessing a communications channel in a network
including a plurality of stations, said method comprising the steps of:

establishing one or more contention windows in which said plurality of stations compete
for access to said communications channel, each contention window corresponding to a different
priority level;

each station wishing to transmit, initializing a backoff counter with a backoff count equal
to a random number of backoff time slots;

waiting until the arrival of a contention window corresponding to a particular
transmission priority, and upon the arrival thereof~ decrementing said backoff counter while said
channel is idle;

attempting to reserve said channel upon expiration of said backoff counter;

declaring the existence of a hidden station after a predetermined number of failed
attempts to reserve said communications channel; and in accordance therewith, increasing the
width of said backoff time slot and repeating said steps of initializing, waiting and attempting to
reserve said communications channel.

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance:

The present application relates to providing a carrier sense multiple access CSMA based communications system and method for accessing a channel, comprising:

“suspending said backoff counter upon receipt of a FCD signal;
resuming decrementing said backoff counter upon failure of a CD signal to arrive within
a CD time, said CD time proportional to a time period during which the arrival of
a CD signal is expected in the event a transmission is received;
deferring transmission until a next contention period upon receipt of a CD signal; and
starting transmission upon expiration of said backoff counter.”

The closest prior art, Kalkunte et al. (USP 6,078,591), discloses a CSMA/CD based method and apparatus for accessing a network channel, wherein the backoff counter is increased or decreased depending on whether a network node has already captured the media and the contention is divided into a plurality of different collision delay intervals depending on whether the priority for transmission is high or not. However, Kalkunte fails to anticipate or render obvious the above quoted limitations of the present application. This renders the claims allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chi H Pham/
Supervisory Patent Examiner, Art Unit
2416
3/16/09

/K. M./
Examiner, Art Unit 2416